
* BMHA Newsletter *

* BICYCLE MOBILE HAMS OF AMERICA *



Volume 12, Number 1

Jan/Feb/Mar 2001

DAYTON HAM VENTION 2000

May 18-20

The 11th annual BMHA forum at the Dayton HamVention is set for Sunday, May 20th at 8:00 am. Our official time is 8:30-9:30, but as in past years, we find the room is unoccupied at 8:00. We will meet informally in the forum room for the first half-hour. The official forum will start at 8:30 am. This arrangement gives us plenty of time to socialize and exchange ideas.

Detailed information of the forum events will appear in the next issue, but I do have some advance information. Keep your ears and eyes open for a small international contingent of QRPedalers cycling from Canada to the Hamvention. Several in this group are BMHA'ers and they will be reviewing the expedition with us.

Plans are also forming for the Annual HamVention BMHA Bike Ride on May 19th. Make plans to bring your bike and ride with us. Watch the next issue for details.

See you at Dayton!

DAYTON hamvention®

The Dayton Hamvention website is located at:
<http://www.hamvention.org/>. -Ed.

EDITOR'S NOTEPAD

Letter from Hartley!

Dear Scott,

Congratulations on putting out an excellent newsletter, in spite of limited time and material. I'm happy to see that you intend to continue producing a paper newsletter. I think the fact that paper has substance and can be held in the hand helps contribute to the image and importance of the club.

Don't be confused by the fact that there are two Hartley Alleys on the legal statement on page 2. Hartley D. is my son David, the lawyer, who gladly contributed his time to the BMHA when this legal duty came up.

Please excuse the delay in getting back to you. In addition to my ever-present and crippling peripheral neuropathy, I've had a few medical setbacks that have used up a lot of time, requiring numerous treks to various doctors and the pain clinic.

I'm finally back to my day by day exercises to counteract the peripheral neuropathy and wean me away from the wheel chair and the walker. I can walk a bit better even though I have to use a cane. Using the cane, I can now walk 200 feet! And I can ride for 12 minutes on my exercycle. So, it's coming along.

Please extend Holiday Greetings to all the BMHA members from:

Hartley NA0A, and Jean N0EOX
hartleya@aol.com

Thanks Hartley! Glad to hear you're doing better! -Ed.



Newsletter Available in Electronic Format...

Electronic subscriptions are available. Formats include MS Word and Adobe Portable Document Files (PDF). Electronic newsletters feature color photos. E-mail the editor at ke4wmf@aol.com to subscribe.

BMHA NEWS

Hartley & Jean Alley: BMHA Lifetime Members!

Hartley founded BMHA and single-handedly ran it for over ten years. After seeing his and Jean's renewal dues, it was decided that the couple who provided so much to this club should no longer have to pay dues. On November 7, 2000, Hartley Alley, NA0A, was officially made a lifetime member. Jean Alley, N0EOX, was made a lifetime associate-member.

BMHA Has a New Logo...

The BMHA logo featured on previous Newsletters has been run through the photocopier a few too many times. It was beginning to look old and worn out; so I gave it a facelift. I managed to locate the source photo of the original BMHA logo. I cleaned up some of the "artistic shading" and added the ham radio equipment. Now the logo has a new, updated look without a wide departure from its roots. The new logo can be seen at the top of page 1 and the bottom of page 5.

A Note From the President...

Dear BMHA members --

As BMHA moves into a New Year and further evolves, let me wish all of you a Happy Holiday and Happy New Year.

The combination of bicycling and ham radio is a natural, and by coming together to share experiences and knowledge, it's even more fun. Whether you carry a handheld transceiver for emergency use, or talk with fellow hams while bicycling to work, or join with other bike-hams on one- or multiple-day trips -- BMHA will be of value to you.

As winter gradually moves into spring and we get on the road more, there'll be more and more chances to combine our hobbies. Remember to share your experiences here on the pages of the BMHA newsletter, whether you're a beginner or a veteran.

Thanks to Scott for offering his time and talent in making this newsletter happen. He can use much help in producing and distributing it. And may I wish BMHA's founder, Hartley Alley, good health and good spirits.

May the force be with you!

Bil Paul KD6JUI
San Mateo, CA

Back Issues Still Available.

You may purchase any of the 39 back issues of the BMHA Newsletter for \$1.50 each, postpaid. For info on the contents of the various issues send a business-size SASE to: BMHA, 316 East 32nd Street, South Sioux City, NE 68776-3512, and ask for the Index of Back Issues. This service available to members only.

BMHA NEWSLETTER

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BMHA NEWSLETTER is a quarterly publication of the Bicycle Mobile Hams of America -- Jan, Apr, July, and Oct. Permission is given to reproduce any of the material in this issue, provided the author is credited and the source is acknowledged as "from the Newsletter of the Bicycle Mobile Hams of America." Please send a clip to the address below. We welcome articles, suggestions, letters, announcements, photos, artwork -- anything pertaining to the combining of bicycling with amateur radio.

The BMHA is affiliated with Adventure Cycling Association, the League of American Bicyclists, and *Worldradio*.

BICYCLE MOBILE HAMS OF AMERICA (BMHA)

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Website: <http://www.LaFetra.com/BMHA/>

ABOUT BMHA

For the information of our first-time readers

Bicycle Mobile Hams of America got its start when a 'Stray' in the June '89 QST magazine asked to "get in touch with hams who operate their radios while bicycle-mobile," signed by Hartley Alley, NA0A. Twenty-five hams responded, filled out questionnaires, and received a summary of the collected data.

In April of '90 we had our first BMHA Forum at the Dayton HamVention. We played to a packed house, overflowed the room, and added 54 names to our mailing list. Our eight subsequent forums have drawn increasingly larger audiences, and now BMHA is firmly established as a 'regular' at this world-renowned event.

This is the fortieth issue of our quarterly newsletter, which has become the clearinghouse for the exchange of info and ideas for the hams who go on the air from their bicycles.

BMHA membership puts you in touch with a friendly and helpful group of bike-riding hams. You'll make contacts through our membership directory, E-mail address list, E-mail discussion group, the annual meeting and Forum at the Dayton HamVention and other regional meetings, and of course through the BMHA Newsletter, which has articles on bike trips, antennas, other gear, operating tips, etc. A membership application is on the next-to-last page.

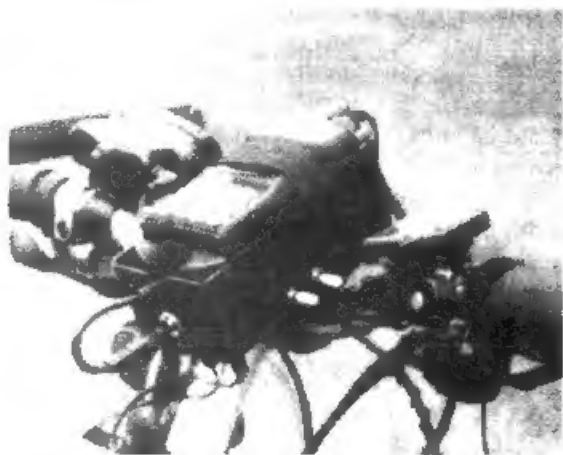
Double the Fun While QRP

by Scott Farrell, KE4WMF

(as published in CQ VHF, Feb '98)

Have you ever wondered how you can best conserve battery power while operating portable or QRP? I know I have. I primarily operate QRP/Bicycle Mobile (Riding the Airwaves, CQ VHF Feb 98), so battery conservation is a major concern. Many of today's newer handheld transceivers (HTs) run on 9.6 volts and are unable to accept 13.8 volts directly. Getting 9.6 volts into these HTs without the dedicated NiCad means using a DC-to-DC Adapter, a device that converts one voltage (13.8V) to a desired voltage (9.6V). The problem with even the most efficient adapters is that they consume power during operation, effectively reducing the duration of your battery. For example, my YAESU EDC-12 consumes an additional 20mA... even with the HT disconnected. Given that my YAESU FT-11R HT consumes a miserly 16mA in standby, over half of my battery's available power is being used to operate the adapter, effectively cutting my operating time in half! Even worse, the battery should be disconnected from the adapter when you are away from your rig or it will slowly discharge.

There are options available for this problem. I'll cover three. Since most HTs can operate on as little as 4 volts, my first option is to operate directly from a 6-volt 4 amp-hour (Ah) gel cell (one came with my high-power bicycle lighting system). With 6 volts, transmitter power is reduced to 2 watts, and maximum current is 900mA, instead of 1.5A. In addition, the battery-draining adapter is eliminated. Four amp-hours is enough to modestly operate most HTs for days; so, I'm happy with that kind of endurance. However, five watts is occasionally needed to use a distant repeater. For this, 12 volts and an adapter are required. This dilemma compelled me to find a way to have the best of both worlds - maximum HT power AND battery longevity; hence, the next option.



Bicycle mobiling is just one of many ways to operate QRP. Shown above is KE4WMF's voltage switching unit integrated with a homebrewed HT cradle.

This option uses two 6-volt batteries instead of one 12-volt battery.

Battery conservation begins with using the minimum power necessary to maintain communications, but continues by using the minimum voltage necessary to operate the radio. Using two 6-volt batteries is in keeping with this philosophy, but it allows 12 volts to be immediately available (for high power). To minimize expenses, I decided to use items already on hand: two 6-volt 4Ah gel cells, a YAESU EDC-12 adapter, a handful of DC coaxial jacks/plugs, and my current homebrewed HT mount. The HT mount holds all components except the gel cells, which fit snugly in an under-seat pack. The idea is relatively simple: Create a system that allows convenient changing of the operating voltage from 6 volts to 12 volts. At first, I simply wired the batteries to have two independent 6-volt outputs and one 12-volt output (series-parallel basics). While I thought success was had, I decided I did not want to physically unplug and plug connectors to change the voltage supplied to the HT while I was riding my bicycle. Also, a method for bypassing the adapter is necessary while operating on 6 volts. I decided a switching network would be much more convenient and safer to operate while riding. Here's the plan: A double pole four throw (DP4T) switch is needed. Since size is important and small DP4T switches are hard to find, I opted to use two double pole double throw (DPDT) switches. Refer to the schematic for the explanation: For 5-watt/12-volt operation, both switches are placed in the "1" position. Switch S1 is used to switch the batteries from parallel to series. The S1B contacts shorting battery V1's negative terminal to V2's positive terminal does this. V1's positive terminal, which now has 12 volts, is routed to S2B via jack J1. S2 either includes or bypasses the DC-DC Adapter in the circuit. In the "1" position, voltage is sent to the DC-DC Adapter via S2B. V2's negative terminal is routed to the DC-DC Adapter via J2. The output of the DC-DC Adapter is sent the HT via S2A and J3. When economic 6-volt operation is desired (most of the time for me), place both switches in the "2" position. S1 places V1 and V2 in parallel. The positive terminals of V1 and V2 are routed to S2B. The negative terminals are routed directly to J3. With S2 in the "2" position, operating voltage bypasses the DC-DC Adapter and is routed to J3. The system is easy and convenient to use. The switches are mounted close to one another for simultaneous operation. Both switches have a center OFF position that helps prevent accidental battery discharge or voltages where they are not wanted (12 volts to the HT, or 6 volt to adapter). The switch handles can also be physically connected with plastic and epoxy for 2P4T action... further avoiding accidents. Fuse protection is abundant. With the vibration my connections receive while riding off road, the last thing I want is a short circuit that results in a fire under my seat! Another benefit of this setup is that switching from 12-volt series to 6-volt parallel DOUBLES my operating time (from 4Ah to 8Ah). With that kind of endurance available, I could operate on a bicycle tour for several days without recharging!



Designed and drafted by Scott A. Farrell, KE4WME.
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Is this switching system overkill? Perhaps. But my endeavor is to make my bicycle mobile station as safe and **efficient** as possible. To illustrate the gains of my setup, I offer the following calculations: Using a 5-5-90 duty cycle (that's 5% transmit, 5% receive/signal, and 90% standby/squelched... the same figures used in manufacturers' ads), a 12-volt 4Ah gel cell would power my HT at 5 watts for



For an electronic copy of the full-size schematic (8½x11") with part numbers, feel free to e-mail me at KE4WMF@aol.com. Please be patient if I don't respond immediately. I have a new baby and travel a lot.

73,
Scott

WEBMASTER'S CORNER

It is the holiday season as I write this, soon to be the season of New Year's resolutions. About the time of the last newsletter issue, we had restyled the website to give it a cleaner look and make it easier to navigate. We have continued to put both the front page and a feature article from each edition of the Newsletter – this is done primarily to give new prospective members a sense of the club and what BMHA is about.

We still have openings to highlight YOUR website on our member's page. With the Internet being so popular, we know that more than six BMHA's have websites. So send me (BMHA-Webmaster@LaFetra.com) your callsign and URL, and I'll make sure that your site is featured too.

Make that a New Year's resolution -- send in your own website's URL so we can list it. I'll even share the Webmaster's resolution -- to make the membership list more interactive so the download is shorter! And for the ultimate New Year's resolutions -- keep pedaling, keep hamming, and keep doing them together.

Best wishes for the upcoming year –

Skip La Fetra, AA6WK
BMHA-Webmaster@LaFetra.com

More Info Regarding the Internet (by KE4WMF)

The BMHA discussion list at eGroups.com appears to be successful. I managed to change the list name to "BMHA." Visit <http://www.egroups.com/group/BMHA> or e-mail BMHA-subscribe@egroups.com to subscribe. The discussion list has an area where members can upload files and share links to each other's websites so others may learn about the equipment and ideas of fellow BMHA'rs.

QUESTIONS AND ANSWERS

HF Question from eGroups

Hi, I am new to this reflector and Amateur radio. I have been a ham 18 months now. My main interest is Morse Code and 10 meters. I am sending in my dues to BMHA this week to become a member. I think it would be very unique to have a QSO on a bicycle, especially to the other station receiving. I bet it raises many eyebrows. Can I use a vertical antenna similar to a Hamstick on a bicycle for HF (10 meters) use, will this put out good? This is all new to me, so I might have a few questions in the future which I guess is what this reflector is all about.

73,

Mark, KG4CYO

Hi Mark,

Welcome to the world of HF CW bicycle mobile. A Hamstick and CW will work great on 10m, bicycle mobile, when the band is open.

Check out my website (below), and Russ KB8U's (see BMHA page member links) for ideas on mounting mobile vertical antennas and iambic paddles.

Hope to work you 2X CW bicycle mobile some day!

73,

John Cumming, VE3JC
<http://www.geocities.com/ve3jc/>

Membership Application

BICYCLE MOBILE HAMS OF AMERICA

Date _____

c/o Mike Nickolaus, NF0N

316 E. 32nd St. – I

South Sioux City, NE 68776-3512

Individual \$10 _____

New member? _____

Renewal? _____

(US or Canada)

Family \$15 _____

Foreign \$15 _____

Donation \$ _____

(limit: two persons)

Make check payable to BMHA, in US dollars or international money order.

Name _____

Call _____

Address _____

License Class _____

City _____

State _____

Zip _____

E-mail address _____

@ _____

Age _____

Most miles bicycled in one day _____

Would you like the BMHA Newsletter in paper copy via snail mail _____

OR via the internet as an e-mail attachment _____ (please check only one)

BMHA's Official Logo

The next time you need to order new QSL cards, don't forget to include the BMHA logo in your design. Here's the official logo, as designed by Russ Dwarshuis, KB8U; and restored by the BMHA Editor.

BICYCLE MOBILE



HAMS OF AMERICA

BMHA NEWSLETTER

Bicycle Mobile Hams of America
C/o Mike Nickolaus, NF0N
316 E. 32nd St.
South Sioux City, NE 68776-3512

First Class Mail

COMMENTS and LETTERS

From eGroups...

A small international contingent of QRPedalers are planning to cycle from Canada to Dayton FDIM/HamVention in May 2001. Starting on the Saturday or Sunday before Dayton, we will cycle across part of Southern Ontario, invade the US via the Sunday evening Lake Erie ferry (Kingsville > Sandusky) and arrive in Dayton QRP-central the day before FDIM (for steak and honey-bourbon salmon at the Lone Star Wednesday evening!). I will post to the list with more information, as the route and other details take shape. We will certainly hope to have the chance to work many of you from the road, or from the evening campsite, or even from the ferry! We could accommodate several more keen riders, if anyone is interested.

73,

John Cumming, VE3JC